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#### ABSTRACT

A An adaptive admission control system for a server application system includes a request queue that stores incoming requests before they are serviced by the server application. A discard queue is provided to store requests to be discarded. An actuator is coupled to the request queue and the discard queue, and an external listen queue to determine the input rate of requests from the listen queue during a previous processing cycle. A controller is coupled to the actuator and the request queue to determine a target number of requests to be sent to the request queue during the next processing cycle based on the difference between the actual and desired queue occupancy of the request queue. The controller sends the target number to the actuator. The actuator sends the target number of requests to the request queue either from the listen queue or from the listen queue and the discard queue based on the input rate of requests from the listen queue.